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ABSTRACT

Technical Preparation (Tech Prep) programs include basic skills and competencies to improve students' school-to-work transition. The following elements characterize Tech Prep: designed for grades 9-14, leading to an technical associate degree; parallels college preparatory program; offers technical program of study in business enterprise, health/human resources, or technology; provides technical preparation; provides an applied foundation; includes a career awareness program; allows students to earn college credit while in high school; leads to entry-level employment placement; and encourages business/industry/education partnerships. Effective Tech Prep programs depend on the following factors: understanding the concept; having administrative leadership and support; confronting the fear of change; recognizing mutual benefits; establishing open communication; setting realistic goals; developing written agreements; and preparing for major curriculum changes. Several steps are necessary to develop a Tech Prep program: appoint a planning committee; conduct initial planning meeting; provide staff orientation and inservice training on the concept; identify selected programs or occupational areas; determine program and course content; design the guidance and counseling function; provide inservice training to the entire district; market the product; and monitor and revise as necessary. (NLA)

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TECHNICAL PREPARATION: PREPARING STUDENTS FOR SUCCESS

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A POSITION PAPER PRESENTED BY THE WISCONSIN ASSOCIATION OF SECONDARY VOCATIONAL ADMINISTRATORS 1991-1992

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TECHNICAL PREPARATION: PREPARING STUDENTS FOR SUCCESS

RATIONALE:

Since 1983, numerous reports have been published that document the failures of the K-12 public education system in the United States. Most of the reports stressed the need for "more" - more math, more science, more language arts.

Yet, many educators and supporters of education realized that there was something inherently wrong with expecting students to improve their basic skills by forcing them to do more of what they were already failing at learning, at least in the way it has traditionally been delivered.

The National Center on Education and the Economy studied the issue and realized that the United States had the worst school-to-work transition system in the industrialized world. Their findings were reported in "America's Choice: High Skills or Low Wages," published in 1990.

The report recommended that "teaching more of the same" without fundamentally changing the way courses are taught was not the answer to the problems cited of an unprepared or underprepared workforce. In response, the report recommended the implementation of a technical preparation program to prepare the 60% or more of the youth who do not go on to a four year college and who are interested in a technical career.

In Wisconsin, about 50 percent of high school graduates enter a four-year college immediately upon graduation, according to a 1991 report published by the University of Wisconsin System. But, after ten years, only one-half complete a degree. Thirteen percent of high school graduates enter a technical college and only one-half of those complete their program.

A 1989 look at projections to the year 2000 by the Bureau of Labor Statistics in Washington, D.C. shows that 15 percent of the jobs will require a four-year college degree, and 10 percent will require 17 or more years of education. In other words, only 25 percent of the jobs will require a university degree, roughly the same as in the past 30 years. Yet much of our emphasis in the K-12 schools is on college preparation.

Other reports have suggested that nearly 80 percent of the jobs in the next century will require the type of education and training provided by technical colleges. In fact, education and training will need to be continuous throughout a person's life to keep up with the constant changes in technology.

A 1991 report from the Secretary of Labor's Commission on Achieving National Skills, chaired by former Secretary of Labor William Brock, identified what work requires of schools.

The commission says that, "By age 16 all young people need a three part foundation of basic skills, thinking skills and personal qualities plus five workplace competencies." The competencies include organizing and allocating resources, communicating and working with others, acquiring and using information, understanding complex systems and the ability to work with a variety of new technologies. These basic skills and competencies can form the foundation for Tech Prep.

WHAT DOES A TECH PREP PROGRAM LOOK LIKE?

I. Elements of a Tech Prep program:

a. Designed for grades 9 - 14, leading to an associate degree in a technical field with the opportunity for students to continue in a baccalaureate program.

b. Runs parallel with a college preparation program.

c. Is built around career clusters and a technical system of study in 1) business enterprise, 2) health / human resources, 3) technology.

d. Provides technical preparation in the fields of engineering, technology and applied science; mechanical, industrial and practical trades, agriculture and natural resources; child and family services; business, retail and wholesale services; restaurant and hotel services; health services.

e. Provides an applied foundation in mathematics, science, communications and technology, teaching both theory and application, through a competency-based, highly structured, coordinated and sequential course of study.

f. Includes a career awareness program at the elementary level, career exploration at the middle level, and career planning and

development beginning in grade 8 and carried through grade 14.

g. Provides students with the opportunity to earn college credit while in high school.

h. Leads to placement in entry level employment.

i. Moves industry and business towards closer partnership with education.

II. Short-Range outcomes of Tech Prep (1-2 years):

a. Improve students' choice of courses in career-focused technical programs.

b. Provide business and industry partnerships.

c. Involve many groups in developing competencies.

d. Improve a student's ability to relate academic course work and skills to the real world by implementing applied academics.

e. Improve public perceptions about technical careers.

f. Recruit, enroll, and educate members of all populations, including special populations and minorities.

g. Implement a technical preparation path to complement the college preparation pathway.

III. Long-Range outcomes of Tech Prep (3-5 years):

a. Place Tech Prep graduates in high skill technical jobs.

b. Implement a 10th grade "gateway" performance assessment.

c. Follow progress of Tech Prep students and graduates to determine the success of the program.

d. Increase involvement by local business, industry and labor in:

- providing work experience and internships for students and staff.
- providing access to facilities, equipment and personnel.
- participating on advisory councils.
- establishing formal partnerships with educational systems.

BARRIERS AND "HOW TO'S":

All of the projections and recommendations are meaningless unless the necessary changes occur. The changes will require a fundamentally different system of delivering education.

Change is always difficult, so to implement the changes required for Tech Prep, schools must identify barriers and develop strategies to overcome them. These include:

1. Understanding the concept: If people do not understand the purpose of Tech Prep and how it is different from the current delivery process, change will be difficult. If the destination can not be defined, then the path to get there can not be mapped out. A common understanding of the concept is critical in starting the process to implement Tech Prep.

2. Administrative leadership and support: Leadership and support from the top decision makers in the district seems obvious but can be undermined if those individuals remain in the background or do not express support and enthusiasm for Tech Prep. Support can be verbal and as simple as offering opening comments at the Tech Prep inservices, and financial, such as approving an adequate budget.

3. Confronting the fear of change: People who fear change in education will impede the process of implementing Tech Prep. During inservices and meetings the leaders promoting this change must understand how change occurs and how to help people move willingly towards change. Providing leadership to implement Tech Prep requires professional staff development. Staff must feel comfortable with the tasks required of them to implement the program. All parties must be involved to define the process for achieving a goal before too many decisions are made about the program.

4. Recognizing mutual benefits: Even though the main purpose of Tech Prep is to improve education and the preparation of students for technical careers, all parties involved must see a personal benefit to them. Turf issues must be set aside through cooperation between vocational and academic instructors at both the secondary and post-secondary level, administrators, guidance counselors, instructors for special populations, board members, advisory committee members, students, parents and the community.

Most of these groups have typically worked in near isolation from each other and now must come together to make the kinds of changes required in Tech Prep.

Mutual agreements and benefitsmust be defined at the beginning of the process and constantly reinforced.

5. Establishing open communication: There must be frequent, open and clear communication throughout the planning and implementation process. A core planning group is needed with sub-committees to work on specific tasks and details. This will insure that a communication process is built into every facet of developing Tech Prep.

6. Setting realistic goals: Do not try to do too much at once. Goals that are too broad or too numerous will be difficult to implement and cause lost momentum when they can not be accomplished. It is important to start small, such as selecting one program area to develop. As the process becomes clearer and problems worked out, additional programs can be added.

7. Developing written agreements: It is easy to form a committee and talk about things that can be done, but it is critical to develop simple, formal agreements indicating what was decided. Those agreements are contracts with other agencies, between district staff, and with the board so that if people change jobs the process of implementing Tech Prep does not get sidetracked.

8. Preparing for major curriculum changes: Some educators believe that a few modifications of existing curriculum are all that will be required. However, in most cases, curriculum work will be one of the major tasks to accomplish. Competency-based curriculum that moves sequentially from grade 11-14 is the major component to Tech Prep. Teachers at the secondary and post-secondary levels, advisory committee members, and others need to work together in small groups to review, modify or revise curriculum documents. They need to identify specific tasks, skills, and concepts that reflect real-world applications in both vocational and related academic courses. Each level of the curriculum should be built upon the previous level so that one course leads into the next.

Other barriers are certain to occur and need to be defined and resolved immediately. It is important for staff to realize that the purpose of Tech Prep is to do a better job of preparing youth for their transition from high school and not allow artificial barriers to stop the district from reaching that goal.

DEVELOPMENT STEPS

It is important to have a systematic process for developing a Tech Prep program. The steps suggested here offer only a brief outline. Those people leading the charge will need to design the details of these steps to fit the specific goals of the district.

a. Appoint a planning committee.

b. Conduct initial planning meeting.

c. Provide staff orientation and inservice on the concept.

d. Identify selected programs or occupational areas.

e. Determine program and course content.

f. Design the guidance and counseling function.

g. Inservice entire district on completed program.

h. Market the program.

i. Monitor and revise as necessary.

SUCCESSFUL RESULTS FROM RICHMOND COUNTY NORTH CAROLINA:

Richmond County, North Carolina has the oldest Tech Prep program in the country. It was established in 1987. Data comparing student success from 1986 to 1989 showed significant changes.

	1986	1989
1. High School Program Enrollment:		
College preparation:	25%	32%
General preparation:	75%	38%
Technical Preparation:	0%	30%
2. Post-Secondary Enrollment:		
Four Year College:	25%	33%
Two year college:	25%	52%

3. SAT scores increased by 47 points from 1986 to 1989.

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